Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHUJI FUJII and SO KAWAMURA

Appeal No. 1998-1916
Application No. 08/406,392

ON BRIEF

Before HAIRSTON, FLEMING, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 10-13. We reverse.

BACKGROUND

The invention at issue in this appeal relates to composite insulators. The appellants' composite insulator includes an insulating rod (1) having end fittings (2) crimped to opposite end portions thereof. Each fitting (2) has a

flange (6) extending radially outwardly from an outer periphery thereof.

An integrally molded layer of elastic insulating material (8) is disposed around an outer peripheral surface of the rod (1) and around a portion of an outer peripheral surface of each of the fittings (2) such that the integral layer of material (8) contacts the outer peripheral surfaces at substantially all points thereof and extends up to and between the flanges (6). The ability of the insulator to resist flash over between the fittings (2) is improved by making the layer thicker (i.e., 30% to 40% thicker) in the region of the end fittings.

Claim 1, which is representative for our purposes, follows:

> 10. A composite insulator comprising:
>
> an insulating rod;
>
> end fittings crimped to opposite end portions of said insulating rod, each of said end fittings having a flange extending radially outwardly from an outer periphery thereof; and

> an integrally molded layer of elastic insulating material disposed around an outer peripheral surface of said insulating rod and around a portion of an outer peripheral surface of each of said end fittings such that said integral layer of elastic insulating material contacts said outer peripheral surfaces at substantially all points thereof and extends up to and between said flanges, wherein a thickness of said integral layer of elastic insulating material disposed around said end fittings is about 30% to about 40% thicker than substantially the entire remainder of said integral layer of elastic insulating material disposed around said insulating rod, to thereby prevent flash over between said end fittings through any portion of said elastic insulating material.

The references relied on in rejecting the claims follow:

Clabburn 4,045,604 Aug. 30, 1977

Kalb 3,898,372 Aug. 5, 1975

Bauer et al. (Bauer) DE 2,553,795 June 10, 1976.[1]

Claims 10-13 stand rejected under 35 U.S.C. § 103(a) as obvious over Clabburn in view of Kalb and Bauer.[2] Rather than

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[1]A copy of the translation prepared by the U.S. Patent and Trademark Office is attached. We will refer to the Bauer translation by page number in this opinion.

[2]The examiner and appellants refer to Bauer as "Martin."

repeat the arguments of the appellants or examiner in toto, we refer the reader to the briefs and answer for the respective details thereof.

OPINION

In deciding this appeal, we considered the subject matter on appeal and the rejection advanced by the examiner. Furthermore, we duly considered the arguments and evidence of the appellants and examiner. After considering the record, we are persuaded that the examiner erred in rejecting claims 10-13. Accordingly, we reverse.

We begin by noting the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

> In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart,

531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

With these principles in mind, we consider the examiner's rejection and appellants' argument.

Recognizing that Clabburn lacks "a thickness of the layer of elastic insulating material disposed around the end fittings being about 30 % to about 40% thicker than substantially the entire remainder of the layer of elastic insulating material disposed around the insulating rod;" (Examiner's Answer at 3), the examiner alleges, "it would have been obvious to one of ordinary skill in the art to modify the insulator of Clabburn by adopting the teaching of Kalb to have better compressive force and the thicker portions of the end weathersheds would inherently enhance the insulation between the end fittings and, thus, give better protection from flash over." (Id. at 6.) The appellants argue, "since the insulator of Clabburn is manufactured by a completely different process ..., there would be no reason to make any portion of the sheath (12) thicker." (Appeal Br. at 10.)

"Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." Para-Ordnance Mfg., 73 F.3d at 1087, 37 USPQ2d at 1239 (citing W.L. Gore & Assocs., Inc., 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-13 (Fed. Cir. 1983)). "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) (citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). "[T]o establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (citing In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) and In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)).

Here, the examiner fails to identify a sufficient suggestion to combine Kalb with the Clabburn. The insulator of Kalb is assembled by axially compressing all its weathersheds, inserting an insulating rod through the aligned openings in the weathersheds, securing the end fittings to the ends of the rod, and then releasing the compressive force applied to the weathersheds. The reference describes the assembly as follows.

> In a preferred method of manufacturing the insulator as many weathersheds **14**, **14**a and **14**b as are necessary to cover and enclose the entire length of the rod between the lower end fitting **12** and the upper end fitting **11** are arranged axially in a column with their ends interfitted as in the final assembly and their central openings aligned, the annular grooves in all the weathersheds being filled, and the ends **32** and **33** of all weathersheds being coated, with the plastic dielectric filling material such as grease before such arrangement, if desired.
>
> Compressive forces is then externally applied to the end weathersheds **14**a and **14**b to compress the entire column of weathersheds by about 10% of its original length. While the weathersheds are retained in compressed condition, the rod **10** is forced through the column of weathersheds, while stretching the weathersheds as indicated above.

Col. 8, l. 59, - col. 9, l. 9.

In contrast, the insulator bodies of Clabburn are formed as an integrally molded sheaths that are shrinkage fitted on an insulating core rod. The reference describes the formation as follows.

> A hollow structure for use as an electrical insulator or other similar structure having outwardly disposed flanges extending circumferentially hereabout. The hollow structure includes a hollow member of heat recoverable material positionable about a central insulator core, electrical conduit, fuse or other substrate. The outwardly extending flanges are integrally formed with the hollow member and extend radially therefrom in the dimensionally heat stable state. The hollow member is designed to be expanded to a heat recoverable state for later facile positioning about an appropriate substrate. The hollow member may then be heat recovered about the substrate to become securely positioned thereon.

Abs., ll. 1-13. There are no discrete weathersheds in Clabburn that would require the end weathersheds to be thicker in order to withstand compressive forces applied thereto in order to assemble the weathersheds on the core rod, as in the case of Kalb.

Because there is no evidence that the Kalb's end weathersheds would have been desirable in Clabburn's integrally molded sheaths, we are not persuaded that teachings

from the prior art would have suggested the combination. The addition of Bauer does not cure the aforementioned defect. Therefore, we reverse the rejection of claims 10-13 as obvious over Clabburn in view of Kalb and Bauer.

CONCLUSION

In summary, the rejection of claims 10-13 under 35 U.S.C. § 103(a) as obvious over Clabburn in view of Kalb and Bauer is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
MICHAEL R. FLEMING Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
LANCE LEONARD BARRY Administrative Patent Judge	)	

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APPEAL NO. 1998-1916 - JUDGE BARRY

APPLICATION NO. 08/406,392

APJ BARRY - 2 copies

APJ FLEMING

APJ HAIRSTON

DECISION: **?ED**

Prepared By: APJ BARRY

DRAFT SUBMITTED: 03 Jan 02

FINAL TYPED:

Team 3:

I have typed all of this opinion.

Please provide insertions where needed including the mailing address.

Please check spelling, cites, and quotes.

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